

WO 2004/094592 A2

553 710

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
4 November 2004 (04.11.2004)

PCT

(10) International Publication Number
WO 2004/094592 A2

(51) International Patent Classification⁷:

C12N

(74) Agent: BRENNAN, Jack; Fish & Richardson P.C., Suite 2800, 45 Rockefeller Plaza, New York, NY 10111 (US).

(21) International Application Number:

PCT/US2004/011745

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 16 April 2004 (16.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/463,899 18 April 2003 (18.04.2003) US

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US 60/463,899 (CON)
Filed on 18 April 2003 (18.04.2003)

(71) Applicant (for all designated States except US): BIOGEN IDEC MA INC. [US/US]; 14 Cambridge Center, Cambridge, MA 02142 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SAH, Dinah, Wen-Yee [US/US]; 4 Longfellow Place, Apt. 2608, Boston, MA 02114 (US). PEPINSKY, Blake, R. [US/US]; 30 Falmouth Road, Arlington, MA 02474 (US). ROSSOMANDO, Anthony [US/US]; 50 Asti Avenue, Revere, MA 02151 (US).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each issue of the PCT Gazette.

(54) Title: POLYMER-CONJUGATED GLYCOSYLATED NEUBLASTIN

(57) Abstract: The following class of molecule is disclosed: a dimer containing a first neublastin polypeptide and a second neublastin polypeptide, wherein: (a) at least one of the polypeptides is glycosylated; (b) at least one of the polypeptides is conjugated at its N-terminus to a water-soluble synthetic polymer; and (c) neither of the polypeptides is conjugated to a water-soluble synthetic polymer at a position other than the N-terminus. Such dimers possess the biological activity of wild-type neublastin while displaying enhanced serum half-life and enhanced potency relative to wild-type neublastin.